Check List the journal of biodiversity data

NOTES ON GEOGRAPHIC DISTRIBUTION

Check List 12(6): 2011, 7 December 2016 doi: http://dx.doi.org/10.15560/12.6.2011
ISSN 1809-127X © 2016 Check List and Authors

First documented record of the Belted Kingfisher, *Megaceryle alcyon* (Linnaeus, 1758), in mainland Ecuador

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Abstract: I present the first documented record of the Belted Kingfisher, *Megaceryle alcyon,* in mainland Ecuador. A young male *M. alcyon* was observed and photographed in the surroundings of Puerto López, province of Manabí, Ecuador in September 2005. A very rare boreal vagrant in mainland Ecuador, *M. alcyon* was previously known from a single sighting in December 1992 and was a hypothetical species pending corroborating evidence, which is now provided.

Key words: Alcedinidae; Coraciiformes; boreal migrant; new record; vagrant; Machalilla National Park; Manabí

The Belted Kingfisher, *Megaceryle alcyon* (Linnaeus, 1758), breeds from the Aleutian Islands, Alaska throughout Canada and USA, south to Gulf of Mexico, Texas, and Florida (Ridgway 1914; Kelly et al. 2009; Woodall 2013). Its regular winter range extends throughout Mexico south to Panama and the Antilles (Ridgway 1914; Howell and Webb 1995; Restall et al. 2006a; Kelly et al. 2009; Woodall 2013). It is a rare visitor to the northern areas of Colombia, Venezuela, and the Guianas (Ridgway 1914; Meyer de Schauensee 1949; Hilty and Brown 1986; Restall et al. 2006a; Kelly et al. 2009; Renaudier et al. 2010). There are records of vagrants in several Pacific islands and northern Europe (Ridgway 1914; Kelly et al. 2009; Woodall 2013). The southernmost records of *M. alcyon* are from the Galápagos Archipelago (insular Ecuador), where it occurs as an occasional migrant in small numbers, although apparently not every year (Lévêque et al. 1966; Harris 1973; Wiedenfeld 2006).

Megaceryle alcyon is a very rare vagrant to mainland Ecuador, known only from one visual record at Ayampe, province of Manabí, Ecuador, by Clive Green on 31 December 1995 (Green 1996; Ridgely and Greenfield 2001, 2006). In the absence of documentation for the occurrence of *M. alcyon* in mainland Ecuador, it is classified as a hypothetical species in this part of the country (Ridgely and Greenfield 2001, 2006; Freile et al. 2015). Here, I present the first vouchered record of *M. alcyon* in mainland Ecuador.

As part of an ornithological expedition to Machalilla National Park in September 2005, I surveyed birds along the coastline of Puerto López, province of Manabí, Ecuador (Figure 1). The climate of the study area is dry, with monthly average precipitation of 20 mm between June and November and 300 mm between December and May. Sandy beaches cover most of the coastline of Puerto López except for a rocky oceanic pool called "El Piedrero de Puerto López" located towards the southern extreme (01.561767° S, 080.821427° W). Dry littoral shrubs grow amidst the bordering rocks of El Piedrero (*sensu* Cerón et al. 1999). Birds were observed with Swarovski SLC 10×42 binoculars. Information reported in this article is based on in-situ field notes that include pencil sketches, textual descriptions, and photographs (available at http://dx.doi.org/0.6084/m9.figshare.4205067, and deposited at the archives of Laboratorio de Zoología Terrestre, Universidad San Francisco de Quito USFQ, Ecuador).

On 16 September 2005 at 16h20, I observed a single young *Megaceryle alcyon* (Figures 2 and 3) at El Piedrero de Puerto López for almost 15 minutes under bright and propitious light conditions. It perched on a branch of a small shrub next to the coastline. It flew short distances along the rocky oceanic pool, perching on coastal rocks and shrubs. While observed, it submerged into the water on two occasions, during which it apparently did not catch any prey.

The following diagnostic characteristics were clearly observed, and described, sketched and photographed

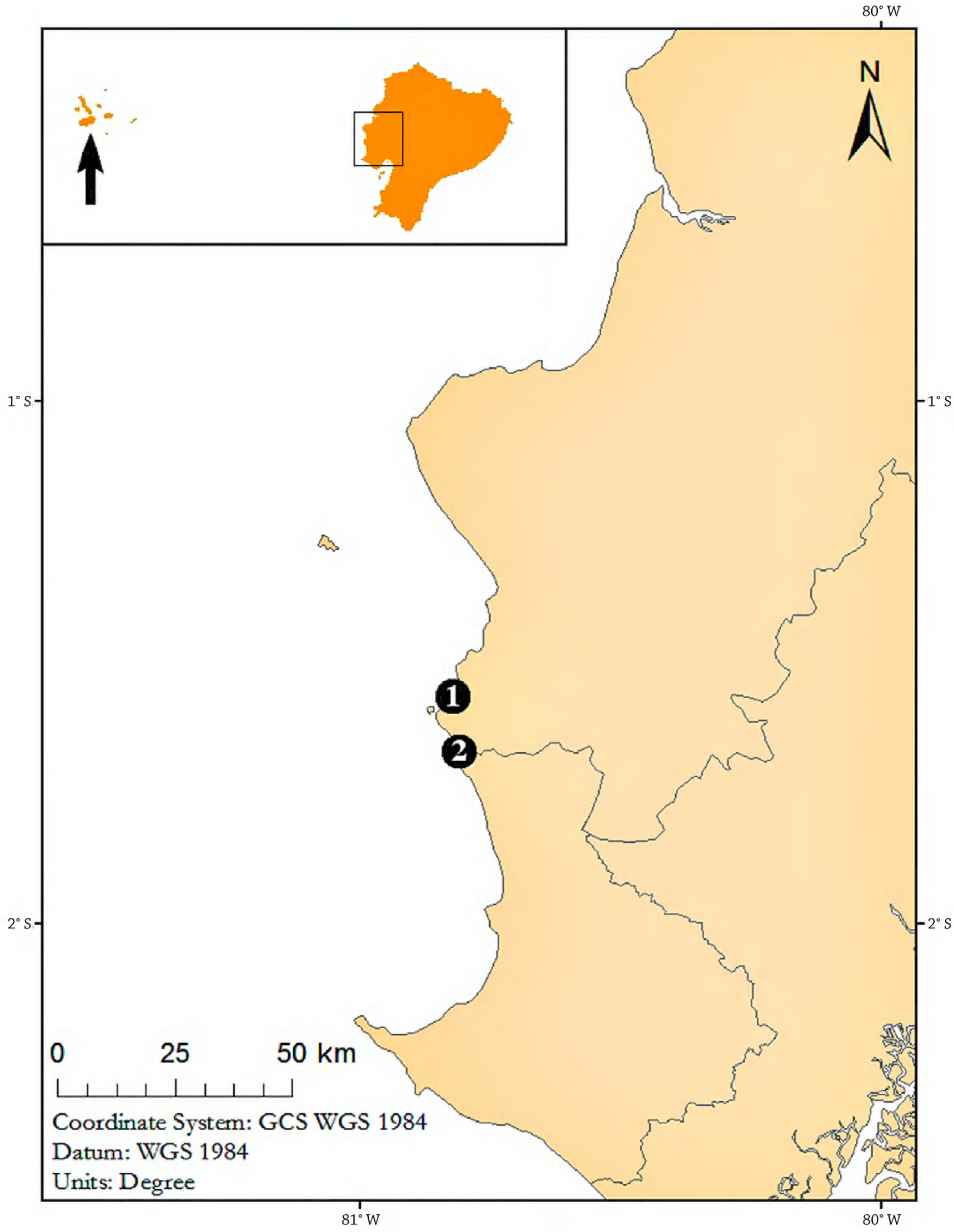

Figure 1. Known localities of Belted Kingfisher, *Megaceryle alcyon*, in mainland Ecuador: (1) El Piedrero de Puerto López (first vouchered record, reported herein), (2) Ayampe (Green 1996; Ridgely and Greenfield 2001, 2006). Arrow points to the Galápagos Archipelago, where the species is an occasional migrant in small numbers (Lévêque et al. 1966; Harris 1973, Wiedenfeld 2006).

(Figures 2 and 3), providing evidence for its identification as *Megaceryle alcyon* (Ridgway 1914; Restall et al. 2006a, 2006b; Kelly et al. 2009): shaggy crest, white supraloral spot, dark bluish grey head and back, white collar, minute white markings on wing coverts and secondaries, extensive white below without any rufous, bluish grey breastband intermixed with cinnamon, bluish grey sides and flanks flecked with white and cinnamon, black bill with light grey basal mandible, and stout bill with exposed culmen less than half as long as wing (approximate 40%, based on lateral photograph showing full length of wing and bill in Figures 2 and 3). Based on darker colouration and presence of cinnamon marks in the breast band, the bird was apparently in juvenile plumage (Kelly et al. 2009); absence of rufous lower breast band suggests that the kingfisher was a

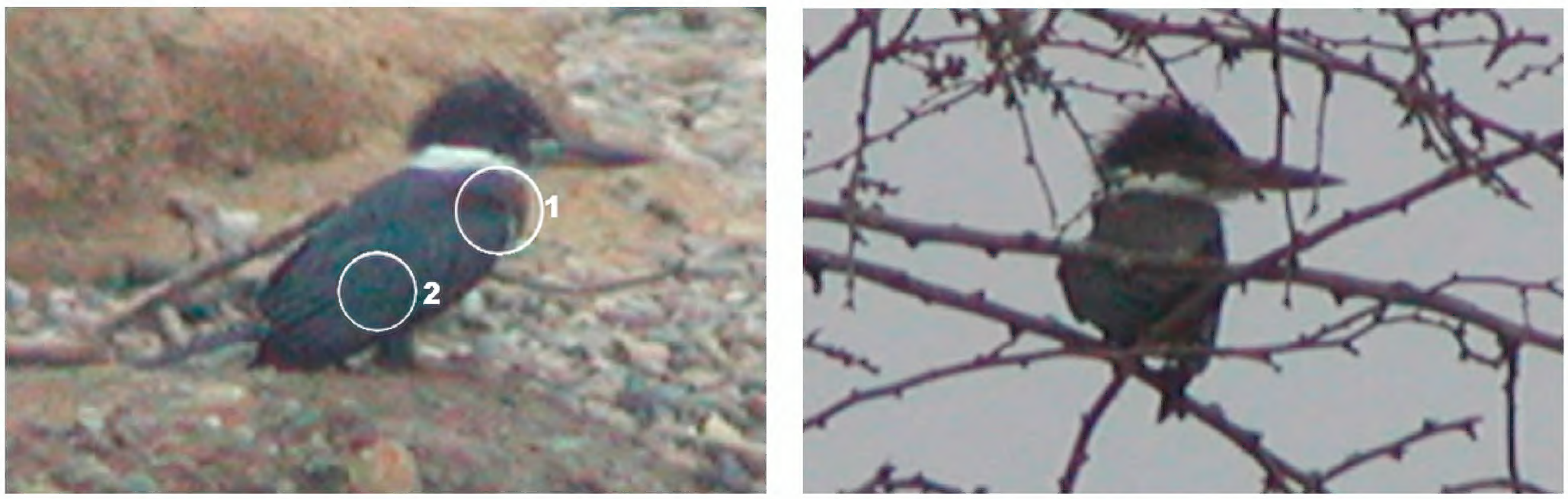

Figure 2. Young male Belted Kingfisher, *Megaceryle alcyon,* observed at El Piedrero de Puerto López, province of Manabí, Ecuador, on 16 September 2005. Note shaggy crest, white supraloral spot, dark bluish grey above, white collar, bluish grey breast band and sides intermixed with cinnamon (circle 1), minute white markings on wings (circle 2), white below breast band, and black, stout bill with light grey basal mandible. Photos by Diego F. Cisneros-Heredia.

young male (Ridgway 1914; Kelly et al. 2009), although rufous lower breast band can be subtle in young females (Restall et al. 2006a, 2006b).

The Ringed Kingfisher, *Megaceryle torquata* (Linnaeus, 1766), is rather frequent in the area of Puerto López. Three *M. torquata* (two males and one female) were observed in the Puerto López area during the same expedition. However, *M. torquata* clearly differs from *M. alcyon* by its extensive rufous under parts (in males, females, and juveniles) and larger body size (Ridgway 1914; Restall et al. 2006a, 2006b; Ridgely and Greenfield 2001, 2006; Woodall and Kirwan 2016). Kingfishers of the genus *Chloroceryle* differ from *M. alcyon* by their smaller body size, metallic bronze green dorsal colouration, shorter and blended crown, and proportionately longer and slender bill (exposed culmen equal or more than half as long as wing) (Ridgway 1914; Meyer de Schauensee 1949; Sibley 2000; Ridgely and Greenfield 2001, 2006; Restall et al. 2006a, 2006b).

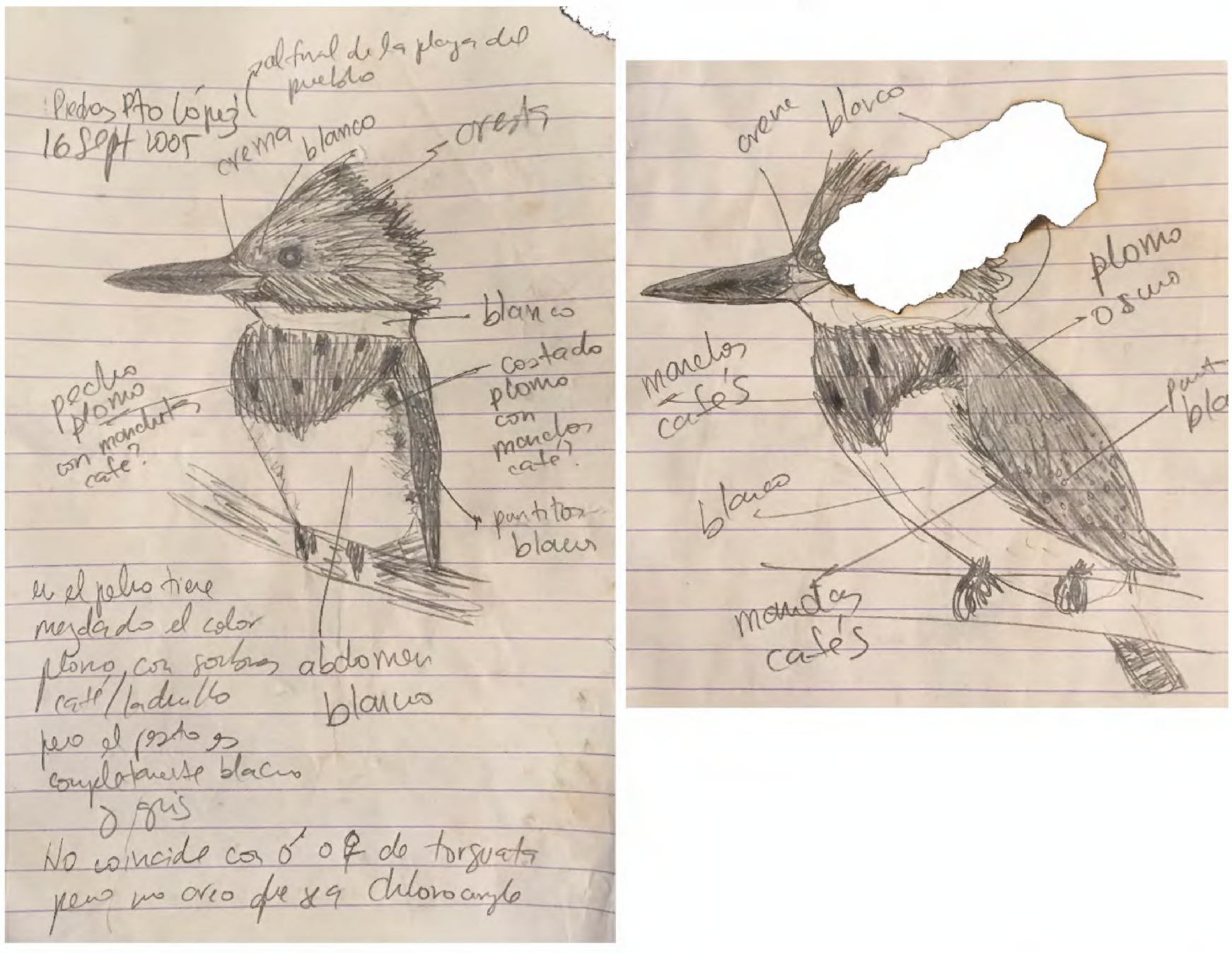

Figure 3. Field notes and sketches (drawn during and immediately after observation) of Belted Kingfisher, *Megaceryle alcyon,* at El Piedrero de Puerto López, province of Manabí, Ecuador, on 16 September 2005. Upper part of the right sketch accidentally burned.

This record provides the first documentation of *Megaceryle alcyon* in mainland Ecuador. Also, it is the first evidence-based record for the Pacific coast of South America (Ridgway 1914; Meyer de Schauensee 1949; Restall et al. 2006a; Kelly et al. 2009; Woodall 2013). No further records of *M. alcyon* have been obtained in the area, despite repeated surveys of the coasts and surrounding wetlands of Puerto López and the Machalilla National Park in December 2005, November 2009, November 2010, November 2011, and January 2016. Puerto López lies at 13 km north of Ayampe, the previously known locality in Ecuador; 620 km south of Malpelo Island (Colombia) and 950 km east of the Galapagos, the closest known localities where migratory *M. alcyon* have been reported. Furthermore, Puerto López is located ca. 1000 km south of the Panamanian coast, the closest area where *M. alcyon* regularly winters. The presence of *M. alcyon* in Galápagos and Malpelo islands but its almost complete absence from the mainland coasts of Colombia and Ecuador suggests that the records from mainland Ecuador correspond to offshore vagrants, rather than coastline migration. Although offshore movements are rare in *M. alcyon* (Kelly et al. 2009; Woodall 2013), vagrants have been reported at Cocos Island (550 km offshore of Costa Rica), Malpelo Island (360 km offshore of Panama), the Hawaii Archipelago (3700 km offshore of USA), the Azores Archipelago (2200 km offshore of Canada), Great Britain, Ireland, and the Netherlands (Ridgway 1914; Lévêque et al. 1966; Slud 1967; Harris 1973; Pitman et al. 1995; Wiedenfeld 2006; López-Victoria and Estela 2007; Kelly et al. 2009; Woodall 2013).

ACKNOWLEDGEMENTS

I thank Paul Greenfield, Fabrice Schmitt, and Galo Buitrón-Jurado for their opinions on the identity of the kingfisher (in litt. March 2006); María Elena Heredia and Laura Heredia for financing the trip and their constant encouragement; Jonathan Guillemot, Paulo Pulgarín, and two anonymous reviewers for their comments on the manuscript; Jeffrey Arellano for his support in the field; and Aves y Conservación / BirdLife Ecuador for their institutional support.

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Received: 11 February 2016
Accepted: 5 November 2016
Academic editor: Johan Ingels